

What is claimed is:

1. A driver circuit for driving an electro-optical device which has:

first to  $i$ th scan lines ( $i$  is an integer of two or more);

5 first to  $i$ th color component signal lines;

first to  $i$ th switching elements, each of which is connected to a  $j$ th scan line ( $1 \leq j \leq i$ ,  $j$  is an integer) and a  $j$ th color component signal line and is controlled by a  $j$ th select signal supplied to the  $j$ th scan line;

10 first to  $i$ th pixel electrodes, each of which is connected to a  $j$ th switching element; and

first to  $i$ th demultiplex switching elements, each of which is connected to the  $j$ th color component signal line at one end and to a signal line at the other end, and is controlled by a  $j$ th demultiplex control signal, multiplexed first to  $i$ th color component signals being output to the signal line,

15 the driver circuit comprising a select signal generation circuit which generates first to  $i$ th select signals, the first to  $i$ th select signals controlling the first to  $i$ th switching elements based on first to  $i$ th demultiplex control signals respectively,

wherein the select signal generation circuit generates the  $j$ th select signal so that at least the  $j$ th switching element is in an ON state when a  $j$ th demultiplex switching  
20 element shifts from an ON state to an OFF state and that the  $j$ th switching element is set to an OFF state before the  $j$ th demultiplex switching element is set to the ON state again after the  $j$ th demultiplex switching element has shifted to the OFF state.

2. The driver circuit as defined in claim 1,

25 wherein the select signal generation circuit includes first to  $i$ th flip-flops, each of which outputs the  $j$ th select signal, and

wherein, in a case where the first to  $i$ th demultiplex control signals cyclically go

active in order from the first to  $i$ th demultiplex control signals, a  $j$ th flip-flop outputs the  $j$ th select signal which is set by the  $j$ th demultiplex control signal and reset by one of the first to  $i$ th demultiplex control signals other than the  $j$ th demultiplex control signal.

5           3. The driver circuit as defined in claim 2,

wherein the first flip-flop outputs the first select signal which is set by the first demultiplex control signal and reset by the  $i$ th demultiplex control signal, and

wherein a  $k$ th flip-flop ( $2 \leq k \leq i$ ,  $k$  is an integer) outputs a  $k$ th select signal which is set by a  $k$ th demultiplex control signal and reset by a  $(k-1)$ th demultiplex control signal.

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4. The driver circuit as defined in claim 2,

wherein the  $j$ th flip-flop outputs the  $j$ th select signal which is set only in a select period of a pixel formed of first to  $i$ th color components corresponding to the first to  $i$ th color component signal lines.

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5. An electro-optical device comprising:

first to  $i$ th scan lines ( $i$  is an integer of two or more);

first to  $i$ th color component signal lines;

first to  $i$ th switching elements, each of which is connected to a  $j$ th scan line ( $1 \leq j \leq i$ ,  $j$  is an integer) and a  $j$ th color component signal line and is controlled by a  $j$ th select signal supplied to the  $j$ th scan line;

first to  $i$ th pixel electrodes, each of which is connected to a  $j$ th switching element; and

first to  $i$ th demultiplex switching elements, each of which is connected to the  $j$ th color component signal line at one end and to a signal line at the other end, and is controlled by a  $j$ th demultiplex control signal, multiplexed first to  $i$ th color component

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signals being output to the signal line,

wherein the  $j$ th switching element is set to an ON state based on the  $j$ th select signal when a  $j$ th demultiplex switching element shifts from an ON state to an OFF state, and set to an OFF state based on the  $j$ th select signal before the  $j$ th demultiplex switching element is set to the ON state again after the  $j$ th demultiplex switching element has shifted to the OFF state.

6. An electro-optical device comprising:

first to  $i$ th scan lines ( $i$  is an integer of two or more);

10 first to  $i$ th color component signal lines;

first to  $i$ th switching elements, each of which is connected to a  $j$ th scan line ( $1 \leq j \leq i$ ,  $j$  is an integer) and a  $j$ th color component signal line and is controlled by a  $j$ th select signal supplied to the  $j$ th scan line;

15 first to  $i$ th pixel electrodes, each of which is connected to a  $j$ th switching element;

first to  $i$ th demultiplex switching elements, each of which is connected to the  $j$ th color component signal line at one end and to a signal line at the other end, and is controlled by a  $j$ th demultiplex control signal, multiplexed first to  $i$ th color component signals being output to the signal line; and

20 a select signal generation circuit which generates first to  $i$ th select signals, the first to  $i$ th select signals controlling the first to  $i$ th switching elements based on first to  $i$ th demultiplex control signals respectively,

wherein the select signal generation circuit generates the  $j$ th select signal so that at least the  $j$ th switching element is in an ON state when a  $j$ th demultiplex switching element shifts from an ON state to an OFF state and that the  $j$ th switching element is set to an OFF state before the  $j$ th demultiplex switching element is set to the ON state again after the  $j$ th demultiplex switching element has shifted to the OFF state.

7. The electro-optical device as defined in claim 6,

wherein the select signal generation circuit includes first to  $i$ th flip-flops, each of which outputs the  $j$ th select signal, and

5        wherein, in a case where the first to  $i$ th demultiplex control signals cyclically go active in order from the first to  $i$ th demultiplex control signals, a  $j$ th flip-flop outputs the  $j$ th select signal which is set by the  $j$ th demultiplex control signal and reset by one of the first to  $i$ th demultiplex control signals other than the  $j$ th demultiplex control signal.

10        8. The electro-optical device as defined in claim 7,

wherein the first flip-flop outputs the first select signal which is set by the first demultiplex control signal and reset by the  $i$ th demultiplex control signal, and

wherein a  $k$ th flip-flop ( $2 \leq k \leq i$ ,  $k$  is an integer) outputs a  $k$ th select signal which is set by a  $k$ th demultiplex control signal and reset by a  $(k-1)$ th demultiplex control signal.  
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9. The electro-optical device as defined in claim 7,

wherein the  $j$ th flip-flop outputs the  $j$ th select signal which is set only in a select period of a pixel formed of first to  $i$ th color components corresponding to the first to  $i$ th color component signal lines.  
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10. A method of driving an electro-optical device which has:

first to  $i$ th scan lines ( $i$  is an integer of two or more);

first to  $i$ th color component signal lines;

25        first to  $i$ th switching elements, each of which is connected to a  $j$ th scan line ( $1 \leq j \leq i$ ,  $j$  is an integer) and a  $j$ th color component signal line and is controlled by a  $j$ th select signal supplied to the  $j$ th scan line;

first to  $i$ th pixel electrodes, each of which is connected to a  $j$ th switching element; and

first to  $i$ th demultiplex switching elements, each of which is connected to the  $j$ th color component signal line at one end and to a signal line at the other end, and is  
5 controlled by a  $j$ th demultiplex control signal, multiplexed first to  $i$ th color component signals being output to the signal line,

the method comprising setting at least the  $j$ th switching element to an ON state based on the  $j$ th select signal when a  $j$ th demultiplex switching element shifts from an ON state to an OFF state, and setting the  $j$ th switching element to an OFF state based on  
10 the  $j$ th select signal before the  $j$ th demultiplex switching element is set to the ON state again after the  $j$ th demultiplex switching element has shifted to the OFF state.

11. The method as defined in claim 10,

wherein, in a case where first to  $i$ th demultiplex control signals cyclically go  
15 active in order from the first to  $i$ th demultiplex control signals, the  $j$ th select signal is set by the  $j$ th demultiplex control signal and reset by one of the first to  $i$ th demultiplex control signals other than the  $j$ th demultiplex control signal.

12. The method as defined in claim 11,

20 wherein a first select signal is set by the first demultiplex control signal and reset by the  $i$ th demultiplex control signal, and a  $k$ th select signal ( $2 \leq k \leq i$ ,  $k$  is an integer) is set by a  $k$ th demultiplex control signal and reset by a  $(k-1)$ th demultiplex control signal.

13. The driving method as defined in claim 11,

25 wherein the  $j$ th select signal is set only in a select period of a pixel formed of first to  $i$ th color components corresponding to the first to  $i$ th color component signal lines.